

# United States Department of the Interior Bureau of Land Management

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Environmental Assessment  
UT-020-2009-0002  
April 15, 2009

## Reservation Ridge Fuels Treatment

**Location:**

Utah & Duchesne Counties, Utah  
Salt Lake Meridian  
T. 11 S., R. 8–10 E.,  
Sections: various

**Applicant/Address:**

U.S. Department of the Interior  
Bureau of Land Management  
West Desert District  
Salt Lake Field Office (Preparing Office)  
2370 South 2300 West  
Salt Lake City, UT 84119  
[http://www.blm.gov/ut/st/en/fo/salt\\_lake.html](http://www.blm.gov/ut/st/en/fo/salt_lake.html)  
Main: (801) 977-4300  
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**Applicant/Address:**

U.S. Department of the Interior  
Bureau of Land Management  
Green River District  
170 South 500 East  
Vernal, UT 84078  
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## CHAPTER 1 INTRODUCTION AND PURPOSE AND NEED

### Introduction

This Environmental Assessment (EA) has been prepared to analyze Bureau of Land Management (BLM) managed land relative to the Reservation Ridge Fuels Treatment in Utah and Duchesne Counties in the State of Utah. This hazardous fuels reduction EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternative to the proposed action. This EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any *significant* impacts could result from the analyzed actions. *Significance* is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of Finding of No Significant Impact (FONSI). A Decision Record (DR), which includes a FONSI statement, is a document that briefly presents the reasons why implementations of the proposed action would not result in *significant* environmental impacts (effects) beyond those already addressed in the Pony Express Resource Management Plan (RMP) 1980 as amended by the Fire Management Planning (FMP) for the Salt Lake District Office (SLDO) 1998 EA UT-020-1998-0008 and the Vernal RMP Record of Decision (ROD) 2008.

If the decision maker determines that this project has *significant* impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a DR may be signed for this EA approving the alternative selected.

### Healthy Forest and Rangelands

Healthy Forests and Rangelands, <http://www.forestsandrangelands.gov/>, is a portal to information about the *National Fire Plan (NFP)*, *Healthy Forests Initiative (HFI)*, and related initiatives. Healthy Forests and Rangelands is a cooperative effort between the United States Department of the Interior (DOI), the United States Department of Agriculture (USDA), and their land management agencies. Healthy Forests and Rangelands provides fire, fuels, and land management information to government officials, land and fire management professionals, businesses, communities, and other interested organizations and individuals. Healthy Forests and Rangelands consolidates and replaces the National Fire Plan and Healthy Forests websites.

### Location

BLM managed land in Utah & Duchesne Counties, Utah  
Salt Lake Meridian  
T. 11 S., R. 8–10 E.,  
Sections: various (see map in **appendix A**)  
SLFO Fire Management Unit (FMU) B12

### Purpose and Need for Action and Decision to be Made

The Reservation Ridge Fuels Treatment is designed to decrease the risk of extreme wildland fire behavior by reducing hazardous fuel conditions in the area. Extreme fire events place firefighters, federal, state and private land, natural resources, and the natural ecosystem at risk. In addition to reducing hazardous fuels, the final decision for this treatment seeks to restore ecosystem conditions that would more likely exist under normal fire-return intervals.

## **Objectives**

- 1) Remove trees that are dead due to beetle kill (standing and down);
- 2) Stimulate aspen regeneration;
- 3) Restore the area to Fire Regime Condition Class (FRCC) 1.

FRCC is an interagency, standardized tool for determining the degree of departure from reference condition vegetation, fuels and disturbance regimes. Assessing FRCC can help guide management objectives and set priorities for treatments. To understand more about FRCC visit this website:

[http://frames.nbii.gov/portal/server.pt?open=512&objID=309&&PageID=1397&mode=2&in\\_hi\\_userid=2&cached=true](http://frames.nbii.gov/portal/server.pt?open=512&objID=309&&PageID=1397&mode=2&in_hi_userid=2&cached=true)

## **Goals**

- a) Utilize a number of different tools to improve the health of the ecosystem;
- b) Protect the area from a high-severity wildland fire.

## **Conformance with BLM Land Use Plans**

The proposed EA was determined to be in conformance with the Pony Express RMP 1990, as amended by the SLDO FMP 1998, Alternative 2/Proposed Action/Integrated Fire/Resource Management Plan page seven and eight. The SLDO FMP specifically mentions the action, and is consistent with the objectives to emphasize greater use of vegetation management to meet resource management objectives.

Vernal RMP ROD (2008) found on page 145 WDF-1 Forests and woodlands will be managed using timber harvest and/or woodcutting in conjunction with pre-commercial thinning, prescribed fire, chaining and other techniques to achieve site-specific objectives of restoring and maintaining forest health, biodiversity, and wildlife habitat; insect and disease control; as a tool for hazard fuel reduction and WUI projects; riparian restoration and; and other resource management goals. Page 145 WDF-1 aspen stands will be managed to maintain or enhance distribution, density, regeneration and sustainability, and to favor regeneration of aspen where deemed appropriate. Stands will be managed for maintenance or enhancement using a variety of methods, including harvest cutting or burning. Page 145 WDF-4 Forests and woodlands will be managed to maintain and restore ecosystems to a condition in which biodiversity is preserved and occurrences of fire, insects, disease and other disturbances will not exceed levels normally expected in healthy forests and woodlands. Page 146 WDF-8 The National Fire Plan will be implemented by conducting treatments to reduce fuel loadings, fire severity, and restoring historical disturbance regimes. Materials from such treatments, including those from hazard fuel reduction projects and wildland urban interface projects will be utilized. Page 146 WDF-1 A proactive program of woodland management will be initiated for the salvage of forest and woodland products that are dead and/or dying due to fire, disease, insect-kill, or other disturbance with the management intent of promoting healthy forest and woodlands.

## **Relationship to Statutes, Regulations and other Plans**

The proposed action is consistent with federal, state and local laws, regulations, and plans to the maximum extent possible. Other activity plans that direct SLDO management in the analysis area include the SLDO Five Year Noxious Weed Control Plan 1996, Utah Rangeland Health

Standards and Guidelines for Healthy Rangelands 1997, the Utah Sage Grouse Conservation Plan Fourth Draft March 2001, The Final Programmatic Environmental Impact Status for Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States 2007 and the Conservation and Agreement for the Management of Northern Goshawk Habitat in Utah 1998.

## **CHAPTER 2 PROPOSED ACTION AND ALTERNATIVES**

### **Introduction**

The SLFO BLM is proposing a broad scale hazardous fuels reduction project immediately south of Ashley National Forest (NF). The analysis area is located in the southeast portion of Utah County and the southwest portion of Duchesne County. The project would be in cooperation with the BLM Green River District, the BLM Price Field Office (PFO), the United States Forest Service (USFS) Roosevelt/Duchesne Ranger District, the Ashley NF, Utah Division of Forestry, Fire, and State Lands, and private land owners.

The Reservation Ridge area is currently experiencing a Douglas-fir beetle epidemic with other beetle infestation. Aerial detection survey maps show tree mortality from the Douglas-fir beetle has increased substantially over recent years. Standing dead trees account for approximately 33% of the total basal area across all stands. The number and volume of dead trees (standing and down) is substantial, with the area of outbreak occupying approximately 60% of the area along the first 10 miles of the ridge. Furthermore, most stands along Reservation Ridge Road are in FRCC 2, indicating a departure from the natural fire regime (one to two natural fire-return intervals have been missed). In the absence of natural disturbance, fuel loading has increased and forest conditions have deteriorated which has contributed to the intensity and extent of the beetle epidemic. These fuel conditions have created a high potential for extreme fire behavior.

The USFS Roosevelt/Duchesne Ranger District is conducting a hazardous fuel project along Reservation Ridge Road (FSR 147) and further to the north in the Ashley NF. Their project is about 1,000 acres.

### **Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment**

In conjunction with USFS efforts, the BLM proposes to reduce hazardous fuels on BLM administered land along Reservation Ridge Road and south leading into the basin below the ridgeline. Fuel load reduction would help restore conditions that would likely exist under FRCC 1.

The proposed action is to reduce hazardous fuels by removing dead and dying trees, and to reduce live crown spacing by thinning the remaining live trees. Where treatments occur, live tree basal area may be reduced to a minimum of approximately 50–75 ft.<sup>2</sup> per acre. Many of the trees killed by insects in recent years (standing and down), dying trees, and a portion of the smaller live trees in the understory would be removed. Removal of small diameter and beetle-infested live trees to reduce current and future ladder fuels may result in approximately 20%–50% reductions in live tree basal area, depending on existing stand densities. Where aspen are present, removal would be focused on live conifer, overall live basal area reduction could be as high as 80% in order to promote aspen regeneration. Aspen regenerates primarily by developing new shoots along the root system of the parent tree. The new shoots are called ‘root suckers’ and this process is called ‘suckering.’ Aspen regeneration is dependent on the availability of sunlight at the soil surface as well as disturbance such as fire or cutting which stimulates the suckering process. In the absence of disturbance, aspen suckering is limited; stands become even-aged and unhealthy. Over-time encroaching conifers may eventually shade out mature aspen trees and the stand may be lost.

In pure conifer stands, live tree removal would not exceed 50% of live basal area. Live tree removal would be limited to trees 16" in diameter at breast height (DBH) or less, except when trees are infested with beetles and dying, an individual tree poses a risk to public safety, or an individual tree or group of trees limit aspen regeneration in which cases there would be no size class limitation. Removal of dead trees may include all size classes.

Overall, trees cut in the project unit would generally be of small diameter—vast majority would be <10" DBH. In order to restore the area to FRCC 1 and create an effective fuel break, ground fuels would be reduced to less than 10 tons per acre and canopy base height would be increased to approximately 6–10 feet. This would require one or more mechanical phases to remove ladder fuels and many of the dead and down fuels. Although ladder fuels are usually associated with seedling and sapling age-classes, the BLM would retain a percentage of healthy trees in both of these age groups for replacement trees. Approximately 6–8 standing dead trees per acre would also be retained for wildlife habitat, and would include larger size classes (preferably 18" or larger) within clumps of trees where possible to enhance the value for wildlife.

Treatments would include: mechanical removal (possible commercial sale of merchantable timber), mechanical mastication, mechanical chipping, hand-felling (chainsaw and ax removal), removing ladder fuels (lower limbs), pile and/or broadcast prescribed fire.

Any commercial sale or stewardship contract would be used as a tool to accomplish the objectives stated in Chapter 1; also a commercial sale or contract may be temporarily suspended as necessary to limit soil impacts during wet periods—or any other undesirable environmental impacts.

The BLM fuels treatment would begin along FSR 147, starting in the spring or early-summer of 2009, then expand over several years to the south as weather permits. Future treatments would occur south of FSR 147 in similarly affected tree stands. The entire fuels reduction treatment (footprint) may be up to 3,000 acres.

The pile and/or broadcast prescribed burning would include a project area. A *project area* is a pre-identified buffer which surrounds the actual targeted prescribed burn unit. The prescribed fire action is only planned within the burn unit perimeter, not within the project area. It is acceptable for fire to cross the burn unit perimeter and enter the project area. Fire burning outside of the burn unit would be managed in order to keep the fire small. Any fire that burns beyond the project area *is not* acceptable and would be considered an 'escape.' The prescribed fire would be transitioned to wildland fire status, assigned a fire number, and managed as a suppression action. The project area for the prescribed burn is the BLM analysis area in this document (see map in **appendix A**), and may also include USFS land to the north.

The project units can be accessed using FSR 147, 101, and 102. Private roads would only be used by obtaining a written agreement from the private land owner. Temporary spur roads and landings constructed to facilitate forest product removal would be obliterated and rehabilitated to prevent further use by off-highway vehicle (OHV) users. Some routes may require sign installation stating, "Closed to Motorized Vehicles" to prevent OHV use until the evidence of these routes or tire tracks are obscured by vegetation cover.

Where deemed necessary, livestock grazing would either be deferred to other areas for a period of time or temporary fencing would be built around new aspen shoots of aspen to block ungulates from disturbing these new aspen shoots.

Data would be collected prior to treatment to characterize the current stand conditions and periodically for up to 10 years post-treatment.

Some maintenance activities may be necessary after the fuels treatment has been concluded. The scheduled start date could be subject to change due to weather, funding, and equipment related issues.

The treated area would be monitored for noxious or invasive weeds that may be promoted due to the proposed activity. Any identified invasive or noxious weeds would be treated in accordance with the SLDO Five Year Noxious Weed Control Plan (1996) and the VFO Noxious Weed and Vegetation Control EA (1983, revised 1985).

All equipment would be cleaned and free of any soil/debris that could harbor weed seeds before entering the analysis area.

#### **Alternative B/Prescribed Fire**

Prescribed burning would occur in select stands ranging in size from 2–75 acres, not to exceed a cumulative total of 500 acres in one season, along Reservation Ridge Road and south of Reservation Ridge Road on BLM administered land in Utah and Duchesne Counties. These treatments would be implemented during the spring and fall of 2009–2011, or in the following years as weather permits.

The prescribed burn would include a project area. A *project area* is a pre-identified buffer which surrounds the actual targeted prescribed burn unit. The prescribed fire action is only planned within the burn unit, not within the project area. It is acceptable for fire to cross the burn unit perimeter and enter the project area. Fire burning outside of the burn unit would be managed in order to keep the fire small. Any fire that burns beyond the project area *is not* acceptable and would be considered an ‘escape.’ The fire would be transitioned to wildland fire status, assigned a fire number, and managed as a suppression action. The project area, for the prescribed fire, is the total area (project boundary) being analyzed in this document and may also include USFS land to the north.

There would not be any new road construction. FSR 147, 101, 102 and private roads would be used with an agreement from each land owner. The probability of creating new routes is not likely during project work, by equipment or support vehicles, yet if routes are created they would be rehabilitated to prevent further use by OHV users. Some routes may require sign installation stating, "Closed to Motorized Vehicles" to prevent OHV use until the evidence of these routes or tire tracks are obscured by vegetation cover.

Livestock grazing would be deferred from the area until vegetation has sprouted and is established. This may take a few years or more depending on rainfall. Also, some areas could be fenced to deter other ungulates from disturbing new sprouts.

Data would be collected prior to treatment to characterize the current stand conditions and periodically for up to 10 years post-treatment. Noxious or invasive weeds that may be promoted due to the proposed activity would be identified and treated in accordance with the SLFO Weed Treatment Plan (1996) and the VFO Noxious Weed and Vegetation Control EA (1983, revised 1985).

All equipment would be cleaned and free of any soil/debris that could harbor weed seeds before entering the analysis area.

Some maintenance activities may be necessary after the fuels treatment has been concluded. The scheduled implementation years could be subject to change due to weather, funding, and equipment related issues.

#### **Alternative C/No Action/No Fuels Treatment**

There would be no hazardous fuels treatment completed in Utah and Duchesne Counties on BLM administered land. Land management would continue to be managed by the BLM and associated District Office. The existing environmental conditions would remain in their current state—as stated in Chapter 3. Beetle infestation would continue; aspen and Douglas-fir stands may eventually not exist in the area.

Wildland fire danger would continue to remain at high risk in FRCC 2 and most likely increase to FRCC 3.

No additional alternatives were suggested by members of the public, Native American Tribes, SLFO, Green River District, or PFO Specialist.

The no action alternative is also considered and analyzed to provide a baseline for comparison if there were no treatment in the analysis area.



## CHAPTER 3 AFFECTED ENVIRONMENT

### Introduction and General Setting

The analysis area resides in Utah County and Duchesne County along the crest of the Tavaputs Plateau, a region of long and linear, relatively steep-walled valleys underlain by shales of the Green River Formation. Elevations of the analysis area range from 8,200–9,700 feet with precipitation ranging from 16–36 inches (NRCS, 1998). Vegetation in the analysis area varies with elevation and aspect from sage, juniper, and mountain brush communities on the south facing side slopes to aspen, Douglas-fir, and subalpine fir species on all slopes towards the upper elevations. Geology of the area is composed predominately of Green River shale intermixed with beds of limestone, sandstone and siltstones (Weiss, 1990).

### Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment

#### Fish Habitat

Aquatic systems within the project area include the Kyune Reservoir, the Kyune River and its tributaries and the White River on the southern boundary. The Kyune River and its tributaries are prone to drought and have a history of non native fish stocking (Hart Pers. Comm.).

*Potential impacts* to fish habitat are discussed in Chapter 4.

#### Forest & Rangelands

Wyoming big sagebrush occupies 48% of the FMU within Utah County and resides in fire regime II and condition class 2. The Rocky Mountain interior Douglas-fir occupies approximately 28% and also falls within fire regime III and condition class 2. Due to the accumulations of different types of fuel, the area is at a moderate to high risk of loss.

The Reservation Ridge area is currently experiencing a Douglas-fir beetle epidemic. Aerial detection survey maps show tree mortality from Douglas-fir beetle increased more than 50% from 2004–2005 along Reservation Ridge. Standing dead trees account for approximately 31% of the total basal area across all stands. The number and volume of dead trees (standing and down) is substantial, with the area of outbreak occupying approximately 60% of the area along the first 10 miles of the ridge. Dead trees combined with abundant regeneration of seedlings and saplings (ladder fuels), has created condition for extreme fire behavior. *There would be an impact* on forest and rangelands (see Chapter 4).

#### Threatened, Endangered or Candidate Aquatic Species

Special status aquatic species are species that are listed or candidates for listing pursuant to the Endangered Species Act (ESA) or sensitive species designated by the BLM and the State of Utah. The best available data were reviewed to determine whether any designated aquatic ESA protected or BLM/Utah Sensitive Species occur near the proposed analysis area. Approximately 6 aquatic species protected under the Endangered Species Act in Utah and Duchesne counties were reviewed and determined to have *no affect* the proposed project. These species are the Bonytail, Colorado Pikeminnow, Colorado River Cutthroat trout, Humpback Chub, June Sucker and Razorback Sucker. All of these fish species have introduced refugia populations outside of the analysis area. These species were considered and eliminated from further analysis.

The project is in the historic distribution of the Colorado River Cutthroat Trout (CRCT) in the Southeastern Geographic Management Unit (GMU) (*Onchorhynchus clarki pleuriticus*) along the Kyune Creek and its tributaries. The BLM is a signatory of the 2001 Conservation and Agreement Strategy for Colorado River cutthroat. Colorado River cutthroat trout are the only trout species endemic to this area and are identified as a sensitive species. The Brown trout is another *Salmonid* that would hybridize with CRCT and may inhabit these systems.

The Utah Natural Heritage Program (UNHP) has no occurrence records for CRCT in the analysis area. According to the DWR, the project phase by the Kyune River and its tributaries would not significantly affect CRCT or CRCT habitat, because this water system is not reliable and can be prone to drought. The river has been stocked with non native species for an unknown number of years. The genetics of fish in the system are unknown and the system has not nor would ever be identified as a priority core conservation area for CRCT (DWR 2008). Because of these reasons, the CRCT would have *no affect* and would not be discussed further.

### **Migratory Birds**

BLM's role under the Migratory Bird Treaty Act (MBTA) is to adequately manage migratory birds and their habitats, and to reduce the likelihood of a sensitive bird species from being listed under the ESA. BLM provides project-level NEPA guidance for complying with the MBTA by identifying sensitive bird species and habitats from sources such as the United States Fish and Wildlife Service (USFWS), the Utah Partners in Flight (PIF). BLM sensitive bird species are shown in Table 1. There is a *potential to affect* migratory birds.

### **Threatened, Endangered or Candidate Terrestrial Species**

Special Status Species (SSS) are species that are listed or candidates for listing pursuant to the ESA or sensitive species designated by the BLM and the State of Utah. Approximately seventeen species were evaluated for potential affects. Of those, '5' are protected under the ESA in Utah and Duchesne counties: Black-Footed Ferret, gray wolf, and the Mexican Spotted Owl were eliminated from further analysis because the analysis area is outside of their current distribution, lacks suitable habitat, or lack of occurrence data. Two SSS, the Canada lynx and the Yellow-billed Cuckoo have been evaluated in this EA. More information may be found in the SLFO BLM Biologist Report on file.

### **Listed, Proposed or Candidate Species – Canada lynx**

The Canada lynx is a federally threatened species inhabiting conifer and conifer-hardwood habitats that support their primary prey—Snowshoe Hares. Lynx habitat in the Southern Rockies is likely found within the upper montane and subalpine forest zones, typically between 2,450–3,650 meters (8,000–12,000 ft.) in elevation (Ruediger et al. 2000).

Snowshoe Hares are the primary prey of lynx—comprising 35%–97% of their diet. Southern populations of lynx may prey on a wider diversity of species than northern populations because of lower average hare densities and differences in small mammal communities. Other prey species include red squirrel, grouse, flying squirrel, ground squirrel, porcupine, beaver, mice, voles, shrews, fish, and ungulates as carrion or occasionally as prey (Ruediger, et al. 2000).

A Lynx Analysis Unit (LAU) is a sub-watershed that approximates a female's home range. The analysis area does not occur within or near a LAU. However, the analysis area does occur within marginal lynx habitat that may provide a possible travel corridor for lynx between areas of suitable habitat.

Lynx residency within the analysis area is very unlikely. Considering the area is marginal Canada lynx habitat prior to this recent lynx occurrence, the last confirmed occurrence of lynx in the Uinta Mountains was in 1972 (McKay 1991). *Potential impacts* to Canada lynx are discussed in Chapter 4.

#### **Listed, Proposed or Candidate Species – Yellow-billed Cuckoo**

Prior to the degradation of riparian habitat in the Great Basin the Yellow-billed Cuckoo was a common to rare summer resident. As a consequence of riparian corridor alteration, in 2001 the USFWS designated the western US subspecies, *C. americanus occidentalis*, a candidate for listing under the ESA (66 Federal Register 38611-38626).

The Yellow-billed Cuckoo is a neotropical migrant requiring large tracts of contiguous riparian habitat (100–200 acres) for nesting within 100 m of water (Parrish et al. 1999). Nesting habitat is characterized as dense sub-canopy with a shrub layer component containing regenerating canopy trees, willows or other riparian shrubs and an over story layer with either large, gallery-forming trees (10–27 m) or developing cottonwoods (3–10 m) (Parrish et al. 2002). In Utah, the Yellow-billed Cuckoo nests in lowland riparian vegetation between 750–1820 m (2,500–6,000 ft.) in elevation. The stick nest is typically found 1.2–2.4 m about the ground on a mature tree. Nesting occurs at disjunction and fragmented habitat patches that may support up to two pairs with overlapping home ranges (Parrish et al. 1999).

DWR estimates less than 20 breeding pairs in Utah with recent breeding records in Weber, Salt Lake, Utah and Washington counties (Parrish et al. 2000). There are no UNHP data for this species in the analysis area and the project has limited cottonwood stands downslope near the Kyune Creek and its tributaries. The analysis area does not have the nesting habitat requirements (i.e. habitat size or habitat structure) to support a breeding pair. Only rare, transients may be found foraging at temporary migratory stop-over habitat. *Potential impacts* to the Yellow-billed Cuckoo are discussed in Chapter 4.

**TABLE 1** Species Information

<b>Common Name <i>Scientific Name</i></b>	<b>Status</b>	<b>Suitable Habitat</b>	<b>Occurrence or Habitat in Analysis area</b>
<b>Listed, Proposed or Candidate Species</b>			
Canada lynx <i>Lynx Canadensis</i>	T/SS	Breeds in mature spruce-fir forests and forages on snowshoe hare in early succession montane habitats (Bosworth 2000).	Extremely rare, travel corridor use only
Yellow-billed Cuckoo	C/SS	Lowland riparian obligates. Requires large tracts of cottonwood/willow habitats with	Rare transient, restricted to fo-

<i>Coccyzus americanus</i>		dense sub-canopies from 2,500–6,000' in elevations (Parrish et al. 1999).	raging habitat
<b>BLM Special Status Species – Birds</b>			
Black Swift <i>Cypseloides niger</i>	SS	Colonial nesting adjacent to waterfalls above 6,000 feet. Forages in montane riparian habitats.	Yes, restricted to foraging only
Flammulated Owl <i>Otus flammeolus</i>	BCC/PIF	Migratory breeder and secondary cavity nester. Nests in mature montane pine forest (especially ponderosa pine forests) in the western US.	Yes, breeding habitat
Greater Sage-grouse <i>Centrocercus urophasianus</i>	SS <sup>+</sup> /FS	Sagebrush obligate species using sagebrush as cover and forage in a variety of seral classes depending upon life stage.	Yes, in lower portion of Utah County
Lewis's Woodpecker <i>Melanerpes lewis</i>	SS	Open ponderosa pine and cottonwood riparian forests. Nests in large dead or decaying trees (Parrish et al. 2002).	Yes
Northern Goshawk <i>Accipiter gentilis</i>	SS/FS	Mature mixed conifer and aspen communities at elevations between 6,000–10,000 feet.	Yes
Red-naped Sapsucker <i>Sphyrapicus nuchalis</i>	BCC/PIF	Primary cavity excavator nests in live or dead trees (snags) in aspen and coniferous trees. Primarily use aspen trees for cavity excavation (Schepps et al. 1999).	Yes
<b>Common Name</b> <b>Scientific Name</b>	<b>Status</b>	<b>Suitable Habitat</b>	<b>Occurrence or Habitat in Analysis area</b>
Three-toed Woodpecker <i>Picoides tridactylus</i>	SS/FS	Nest in dead or live trees (spruce, tamarisk, pine, cedar, aspen, lodgepole, balsam fir above 8,000 ft. Forages on beetles under bark or live and burnt trees.	Yes
Williamson's Sapsucker <i>Sphyrapicus thyroideus</i>	BCC/PIF	Primary cavity excavator nest dead trees of aspen and coniferous trees. Primarily use aspen trees for cavity excavation (Schepps et al. 1999).	Yes
<b>BLM Special Status Species – Mammals</b>			
Fringed Myotis <i>Myotis thysanodes</i>	SS	Forages in desert shrub, sagebrush, piñon-juniper, ponderosa pine, and montane forest. Roosts in abandoned mines and caves (Oliver 2000).	Yes, restricted to foraging habitat
Spotted bat <i>Euderma maculatum</i>	SS	Desert terrain roosting under loose rock or in crevices in rock cliffs (Oliver	Yes, restricted to foraging habitat

		2000). On the south slope of the Uinta Mountains, they have been located near steep-walled stream canyons such as Ashley Creek, Black Canyon and Brush Creek. They have also been located on the South Unit in pinyon/juniper/sage at 7400'.	only
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	SS	Roosts in abandoned mines, caves. Forages in sagebrush, pinon-juniper, mountain shrub and mixed conifer communities throughout Utah (Oliver 2000).	Yes, restricted to foraging habitat only
Western Red Bat <i>Lasiurus blossevilli</i>	SS	Roosts in trees in trees and foliage in low elevation, riparian cottonwood forests (Oliver 2000).	Yes
Pygmy Rabbit <i>Brachylagus idahoensis</i>	SS <sup>+</sup>	Patchy distribution. Mature sagebrush habitats with deep friable soils.	Yes, restricted to southern portion.
<b>BLM Special Status Species – Amphibians and Reptiles</b>			
Western toad <i>Bufo boreas</i>	CS	Permanent water bodies in riparian, mountain shrub, mixed conifer and aspen-conifer forests (Bosworth 2003).	Yes
Smooth green snake <i>Opheodrys vernalis</i>	SS	Montane riparian and wet meadow communities in Wasatch, Unita, Abajo and La Sal Mountain Ranges	Yes

2007 USFWS Endangered, Threatened, Proposed, and Candidate Species Utah Counties, November.  
<http://www.fws.gov/mountain-prairie/endspp/countylists/utah.pdf>.

Designations under the Endangered Species Act (ESA): E= endangered, T = threatened, C = candidate, + = currently under review by USFWS for listing under ESA. SS= BLM/Utah Sensitive Species.

2008 Birds of Conservation Concern (BCC) and Utah Partners in Flight (PIF) Priority Species List in Utah.

## **BLM Special Status Species – Birds**

### **Bald Eagle**

The Bald Eagle was listed as an endangered species by the USFWS in 1967 (32 Federal Register 4001) and was subsequently listed as a threatened species under the ESA during 1995 (60 Federal Register 35999-36010). Currently the Bald Eagle is protected under both the MBTA and the Bald Eagle Protection Act of 1940.

Historic Bald Eagle breeding sites existed in Tooele, Utah, Wasatch, Summit, and Wayne counties; however today only a few active breeding sites exist in Emery, Grand and Salt Lake Counties. Approximately three or four breeding pairs remain with the eagle using mature cottonwood stands for nesting.

There are no Bald Eagle breeding sites, winter concentration areas or occurrence records of Bald Eagles in the analysis area. Riparian habitat is limited to the Kyune Creek River drainage and Kyune Reservoir, which is not reliable and could be prone to drought.

Use by Bald Eagles in the area would be limited to winter roosting in mature cottonwood trees. The area is inaccessible in winter due to heavy snowpack. Because of the above rationale, there would be *no affect* to the Bald Eagle.

### **Black Swift**

The Black Swift is a neotropical migrant inhabiting mountainous riparian regions of the western United States and Canada. The subspecies inhabiting central Colorado through central Utah is the *Cypseloides niger borealis* (Parrish et al. 1999). The Black Swift is extremely rare in Utah with two confirmed breeding locations: the Bridal Veil Falls area and the Aspen Grove Area (Knorr 1962) in Utah County. The Black Swift nests in small colonies (< 10 pairs) in inaccessible sites with an unobstructed flight path ranging in elevation from 6,000 ft. to 11,500 ft. (1,820 m to >3,500 m) (Parrish et al. 1999; Knorr and Knorr 1990; Foerster and Collins 1990). The ecological components of Black Swift nesting habitat include the presence of waterfalls, high relief (cliffs), inaccessibility to human disturbance and predators, and dark and unobstructed flight paths (Parrish et al. 1999). Black Swifts would exhibit high nest site fidelity and also reuse nests. Additional breeding sites in the Wasatch and Uinta ranges may exist where habitat is appropriate.

Black Swifts are aerial insectivores (Marín, M. 1999b) and would diurnally forage up to 40 km away from nesting habitat (Knorr 1961).

The analysis area has some of the general habitat components of the Black Swift (i.e. higher elevation mountainous, riparian habitat) however; the specific components needed for Black Swift nesting habitat (i.e. waterfalls with cliffs) are not known to exist in the analysis area. There are no UNHP data for Black Swift in the analysis area. Yet, Black Swifts may use the riparian areas for foraging; therefore there may be a *potential to impact* this species. Consequences are discussed in Chapter 4.

### **Flammulated Owl**

The Flammulated Owl is a neotropical migrant moving from wintering grounds in central Mexico, the highlands of Central America, and coastal California to montane Ponderosa pine and Douglas-fir forests in the Western US. This species is common throughout the mountain ranges of Utah, but primarily breeds in southwestern and the north-central parts of the state. Recent studies in Utah (Oleyar 2000) suggest that the Flammulated Owl could also successfully breed in aspen dominated forest. This species is a secondary-cavity nester requiring the presence of woodpecker cavities for nesting (McCallum 1994). Nests are usually initiated by mid-May with a clutch of 2–4 eggs (McCallum 1994). The nesting and fledging period for the Flammulated Owl is typically complete by the end of July (McCallum 1994). Potential impacts to the Flammulated Owl are discussed in Chapter 4.

### **Greater Sage-grouse**

The Greater Sage-grouse has been petitioned repeatedly for listing under the ESA. The USFWS is currently conducting another review for listing the greater sage grouse, which should be completed by the summer of 2009 (USFWS. 2008. Mountain-Prairie Region Endangered Species Program: <http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/>)

Petitions for listing have been made because the Greater Sage-grouse population and habitat declines.

The distribution of Greater Sage-grouse covers 11 western states and 2 Canadian provinces: Washington, Oregon, California, Nevada, Idaho, Montana, Wyoming, Utah, Colorado, North Dakota, South Dakota, Alberta, and Saskatchewan (Schroeder et al 2004).

Sage-grouse are sagebrush obligates utilizing sagebrush (*Artemisia* spp.) in various seral stages depending upon the stage of the animal's lifecycle and the season of use. Mating occurs in the spring at leks or male breeding display sites which are open areas surrounded by sagebrush on low sagebrush flats, ridge tops, cropland and burned areas (Gates 1985, Connelly et al. 1981). Both males and females traditionally return to the same lekking area to mate and for the female to nest (Fischer et al. 1993) and may nest within 200 m of their previous year's nest (Gates 1983, Lyon 2003). Most sage-grouse nests are located under sagebrush plants.

There are no Greater Sage-grouse leks in the analysis area, yet there is the *potential to affect* Greater Sage-grouse habitat in later phases proposed action in the southern portion of the analysis area. Potential impacts to Greater Sage-grouse are discussed in Chapter 4.

### **Lewis's Woodpecker**

The Lewis's Woodpecker is a primary cavity nesting species excavating holes in tall trees, often dead or blackened by fire (DeGraaf et al. 1991). This woodpecker also nests in utility poles, or stumps, but prefers ponderosa pine, cottonwood, or sycamore. The major breeding habitat consists of open park-like ponderosa pine forests (DeGraaf et al. 1991). The Lewis's Woodpecker is attracted to burned-over Douglas-fir, mixed conifer, pinyon-juniper, riparian, and oak woodlands, but is also found in the fringes of pine and juniper stands, and deciduous forests, especially riparian cottonwoods (areas with a good under-story of grasses and shrubs to support insect prey populations are preferred). Dead trees and stumps are required for nesting. Wintering grounds are over a wide range of habitats, but oak woodlands are preferred. There *may be an affect* to the Lewis's Woodpecker. Potential impacts are discussed in Chapter 4.

### **Northern Goshawk**

This species inhabits territories in coniferous, deciduous, and mixed forests and prefers to forage in closed canopy forests with moderate tree densities (Graham et al 1999). A Goshawk's home range can be up to 6,000 acres and contains foraging, nesting and post-fledgling habitat (Reynolds 1992). Many of the documented Goshawk territories on the nearby Ashley NF are associated with lodge pole and aspen cover types (Ashley NF unpublished data). Some of the Goshawks that breed on the Ashley NF are year-long residents and some migrate short distances (Paulin 1998). *Potential impacts* to the Northern Goshawk are discussed in Chapter 4.

### **Red-naped Sapsucker**

The Red-naped Sapsucker is a cavity-nesting species breeding in deciduous and mixed woodlands including aspen groves in open ponderosa pine forests, aspen-fir parklands, logged forests where deciduous groves remain, aspen groves in open rangeland, birch groves, and montane coniferous forests (USDA FS 2006). The incubation period lasts about 2 weeks, with the female incubating the 4–5 eggs during the day, and the male incubating the eggs during the night. Chicks leave the nest about one month after hatching.

The Red-naped Sapsucker creates sap wells in the bark of woody plants to feed. There is a *potential to affect* the Red-naped Sapsucker. Potential impacts are discussed in Chapter 4.

### **Short-eared Owl**

The Short-eared Owl is a ground-nesting bird inhabiting grasslands, shrublands, and other open habitats. This species selects breeding sites based on prey abundance depending on local rodent densities (Baicich et al. 1997). The Short-eared Owl nests in April on the ground in a small depression excavated by the female. Usually 4–8 eggs are laid, but when rodents are abundant, as many as fourteen eggs may be laid. The eggs are incubated by the female for 24–28 days. The male parent brings food to the nest, but the food is given to the owlets by the female. The young leave the nest after 12–17 days, but they are unable to fly for another 10 days. UNHP has no documented records of the short-eared owl, but habitat for this species is in the southern range of the analysis area. *Potential affects* to the Short-eared Owl are discussed in Chapter 4.

### **Three-toed Woodpecker**

In Utah, the Three-toed Woodpecker is a year-round resident of coniferous forests above 8,000 ft. in elevation (Parrish et. al. 2002). The Three-toed Woodpecker requires snags for feeding, perching, nesting, and roosting. Activities such as logging, fire suppression, and insect infestations remove or eliminate snags which threaten their habitat (Parrish et. al. 2002).

Nesting for Three-toed Woodpeckers occurs in May and June and young can be found in the nest into July (Nature Serve 2003). This species forages on wood boring insects (Parrish et. al. 2002). This woodpecker has been found in lodge pole pine, Douglas-fir, spruce/fir and mixed conifer on the Ashley NF (USDA Forest Service, 2006). Surveys completed for a nearby project on the Ashley NF in 2006 detected Three-toed woodpeckers in heavy mixed conifer areas (USDA FS, 2006b). UNHP has no documented records for the Three-toed Woodpecker, but foraging and nesting habitat for this species is in the analysis area. *Potential affects* to the Three-toed Woodpecker are discussed in Chapter 4.

### **Williamson's Sapsucker**

The Williamson's Sapsucker is a cavity nester in montane coniferous forest including fir, lodge pole pine, and aspen stands. They are in migration during winter and also in lowland forest (AOU 1983). This species also creates sap wells in the bark of woody plants to feed on sap. It nests in dead or decaying pine, fir or aspen tree cavity (Terres 1980), digs a hole 2-18 m above ground and clutch size is 3–7 (usually 5–6). Incubation, by both sexes, lasts 12–14 days. The young are tended to by both adults and then leave the nest cavity about 28–35 days after hatching (Terres 1980). UNHP has no documented records for the Williamson's Sapsucker, but habitat



for this species is in the analysis area. *Potential affects* to the Williamson's Sapsucker are discussed in Chapter 4.

## **BLM Special Status Species – Mammals**

### **Fringed Myotis**

The Fringed Myotis bat is a widely distributed, but an uncommon species in Utah. This bat species inhabits caves, mines, and buildings, most often in desert and woodland areas and forms colonies of several hundred individuals. The primary prey items are beetles plucked from vegetation or the ground. UNHP has no documented records for the Fringed Myotis, but suitable foraging habitat exists for this species in the analysis area. The proposed hazardous fuels treatment *may impact* this species (see Chapter 4).

### **Spotted bat**

The Spotted bat has been captured in Utah in several habitats: low riparian, desert shrub community, sagebrush/rabbitbrush, ponderosa pine forests, montane grassland (grass-aspen), montane forest and woodland (grass-spruce-aspen) (Oliver 2000). The Spotted bat roosts in caves and in cracks or crevices in cliffs and canyons and feeds primarily on moths and beetles in clearings amongst pine forests. Though no Spotted bats have been detected within or near the analysis area, foraging habitat for this species is nearby. The proposed hazardous fuel treatment *may affect* this species (see Chapter 4).

### **Townsend's big-eared bat**

In Utah the Townsend's big-eared bat occupies primarily shrub steppe and pinyon-juniper habitats with rock formations for suitable roosting habitat (Nature Serve 2003). Maternity and hibernation colonies are formed typically are in caves and mine tunnels in various habitats and elevations. On the nearby Ashley NF, Townsend's big-eared bats have been located in two caves that are not near the analysis area. Limestone Hills, Limestone Plateau and various canyon ecological units contain most of the suitable habitat on the Ashley, since they have rock formations that are likely to contain caves. Only suitable habitat for Townsend's big-eared bat in the analysis area would be foraging habitat. The proposed treatment *may affect* this species (see Chapter 4).

### **Western Red Bat**

The Western Red Bat occurs in the western United States and parts of Mexico. The species is extremely rare in Utah, being known from only a few locations in the state. Western Red Bats are normally found near water, often in wooded areas. Some individuals may hibernate during cold times of year, but most members of the species migrate south to warmer climates for the winter. The species is nocturnal; daytime roosting usually occurs in trees. Females may give birth to one litter of two to four young during late spring. Western Red Bats eat insects, often foraging near riparian areas. UNHP has no documented records for the Western Red Bat in the project; however, suitable habitat exists for this species near the Kyune Creek River drainage and Kyune Reservoir. The proposed hazardous fuel treatment *may affect* this species (see Chapter 4).

### **Pygmy Rabbit**

The Pygmy Rabbit is currently under a 12-month review by the USFWS for listing under the ESA. The Pygmy Rabbit occurs in semi-arid shrubsteppe habitat of the Great Basin and Inter-

mountain West. Its distribution is patchy within its range. It is typically found in areas dominated by big sagebrush, although rabbitbrush or greasewood may be co-dominant in some areas (Burt 1980). The Pygmy Rabbit is more susceptible to habitat fragmentation than other sagebrush obligate species because its distribution is naturally patchy, and the loss of habitat and travel corridors results in the creation of isolated populations, which are more vulnerable to random population fluctuation, limitation by predators, and loss of genetic variability. The Pygmy Rabbit is a sagebrush obligate species which depends on sagebrush for survival feeding almost exclusively on sagebrush during the winter and also in the summer along with grasses and forbs. UNHP has no documented records for the Pygmy Rabbit, but suitable foraging habitat exists for this species in the southern portion of the analysis area in sage brush habitat. The proposed hazardous fuel treatment *may affect* this species (see Chapter 4).

## **BLM Special Status Species – Amphibians & Reptiles**

### **Western toad**

Western toads use a variety of habitats ranging from desert springs to mountain wetlands, and it ranges into various uplands habitats around ponds, lakes, reservoirs, and slow-moving rivers and streams. It digs its own burrow in loose soil or uses those of small mammals, or shelters under logs or rocks. The eggs and larvae develop in shallow areas of ponds, lakes, or reservoirs, or in pools of slow-moving streams. UNHP has one record with no data of the boreal toad on the southern end of Kyune Creek from a museum specimen. Suitable habitat exists for this species near the Kyune Creek River drainage, Kyune Reservoir, and Big Creek. The proposed hazardous fuels treatment *may affect* this species (see Chapter 4).

### **Smooth green snake**

The Smooth green snake is patchily distributed throughout the northeastern and western United States, southeastern Canada, and parts of Texas and Mexico. In Utah, the species may occur in the Wasatch, Uinta, Abajo, and La Sal Mountains, but is uncommon in Utah.

The Smooth green snake eats terrestrial invertebrates, chiefly insects and spiders. Females of the species lay an average of four to nine eggs in mid-to-late summer. Eggs hatch several days to one month after laying. The Smooth green snake prefers moist areas, especially moist grassy areas and meadows where the snake is camouflaged due to its solid green dorsal coloration. Like many other snakes, the species is active during the spring, summer, and fall, but hibernates during the cold winter months. UNHP has no documented records for the Smooth green snake in the project; however, suitable habitat exists for this species near the Kyune Creek River drainage and Kyune Reservoir, and Big Creek. The proposed hazardous fuels treatment *may affect* this species (see Chapter 4).

## **Wetlands & Riparian Zones**

The analysis area contains several perennial streams including the Price River, Kyune Creek, Bear Creek, Horse Creek and West Fork of Willow Creek. These streams have not been assessed to determine functioning condition. The streams are used as a major watering source for wildlife and livestock. These stream corridors provide essential habitat for wildlife species in the area. Riparian vegetation includes obligate species (cottonwood, willow, sedges, rushes, etc.)

and facultative species (big sagebrush, rabbitbrush, Rocky mountain juniper, etc.). The riparian areas along these streams also include heavy infestations of musk thistle and hounds tongue.

Disturbance caused by logging operations in the early 1990's allowed these infestations to establish along riparian corridors, along most logging access roads and in areas that were logged. The noxious weed infested areas include steep slopes and ridges within the analysis area where timber has been removed. The proposed hazardous fuels treatment *may affect* riparian areas (see Chapter 4).

### **Wildlife**

The analysis area provides corridor habitat for large mammals, including black bear, bobcat, and the mountain lion. Crucial habitats for Elk, Mule deer and Moose vary in the analysis area depending upon the season.

#### **Wildlife – Black bear**

Black bears are omnivores inhabiting primarily steep terrain, thick understory vegetation with abundant sources of food in the form of shrub or tree-borne soft or hard mast (fruit and nuts) within in large forested areas in Utah. In a survey of bear observations recorded by resource managers in Utah eighty percent of bear survey observations occur between 2130 m (7000 ft.) and 3050 m (10,000 ft.) (Danvir et al. 1983). There is no recorded observation of the Black bear in the analysis area. Although the project is at high elevation, the understory vegetation lacks abundant forage for Black bear. There would be no *affects* to the Black bear; therefore this species would not be discussed further.

#### **Wildlife – Bobcat**

Bobcats are fairly common throughout Utah, although individuals are rarely seen due to the secretive nature of the species. Bobcats prefer areas with thick undergrowth, and can be found in deserts, mountains, and numerous other types of habitat. They are primarily active at night and seek shelter in rocks, trees, or hollow logs when inactive. Bobcats are typically solitary except when breeding. There are no recorded observations of Bobcats or Bobcat dens in the proposed analysis area. The understory lacks appropriate cover for hunting prey; therefore the Bobcat would *not be affected* by the proposed project and would not be discussed further.

#### **Wildlife – Mountain lion**

Mountain lion (Cougar) prefer pinyon-juniper and pine-oak brush areas based on available prey base. Within these habitat types, lions prefer areas where there are rocky cliffs, ledges and tall trees or brush that can be used for cover. There are no recorded observations of Mountain lions or denning habitat in the analysis area. The likelihood for Mountain lions to be in the analysis area would be rare. Mountain lions are *not anticipated to be affected* and would not be discussed further.

#### **Wildlife – Elk**

Elk crucial summer habitat begins at Reservation Ridge Road and moves north and also from Kyune Creek east into Duchesne county and south in to Carbon county. The initial stages of the project would begin along Reservation Ridge on the south side of the analysis area, which is at the southern most boundary of the crucial summer range. Calves are usually born from mid-May

to early June (USDA Forest Service 2006). There is no crucial Elk fawning habitat fawning area within the analysis area.

Winter foraging habitat, a limiting habitat factor for Elk, consists primarily of browse and grass species such as aspen, sagebrush, mahogany, oak brush, serviceberry, snowberry, and bitterbrush (USDA Forest Service 2006). Crucial winter habitat starts below the split of the Right Fork of the Kyune Creek and travels south to Interstate 6. The rutting season occurs in September and October, with the peak occurring in mid-to-late September. The proposed hazardous fuels treatment *may affect* this species (see Chapter 4).

### **Wildlife – Mule deer**

Mule deer occur in coniferous forests, desert shrubs, chaparral, grasslands with shrubs, and are often associated with early successional vegetation. Mule deer habitat is nearly always characterized by areas of thick brush or trees (escape cover), interspersed with small openings (foraging areas). Crucial summer habitat for mule deer habitat overlaps most of the analysis area. Winter foraging habitat, which has been documented as the limiting habitat factor for mule deer, consists primarily of browse species such as sagebrush, mahogany, oak brush, serviceberry, and bitterbrush. Only a small portion of the analysis area overlaps crucial winter range, in the same general area as Elk winter range.

The breeding (rutting) season occurs in the fall with the peak of the rut occurring in mid-November. In late spring the female does seek solitude for fawning, and fawns are normally born during the month of June with an average fawning date in Utah of June 20 (USDA FS2006). The proposed hazardous fuels treatment *may affect* this species (see Chapter 4).

### **Wildlife – Moose**

Moose can be found in the mountains of the northern and northeastern portion of Utah. Moose prefer forest habitats, especially those locations with a mixture of wooded areas and open areas near lakes or wetlands. Some Moose make short migrations between summer and winter habitats. Moose usually occur singly or in small groups and breed in the late summer or early fall. Females typically give birth to one (rarely two) calf in late-spring.

Moose are herbivores that prefer to feed on aquatic vegetation and new woody growth during the spring and summer. During the winter, when preferred food items are not available, Moose switch to a diet of bark and twigs from evergreen and deciduous trees. Moose are active both day and night, but peak activity occurs near dawn and dusk. The population objective for all of the Wasatch Mountains is 800 animals and the current estimate is 550. This estimate has been consistently held since 2000. Wintering habitat for Moose overlaps most of the analysis area. Crucial calving habitat follows the Kyune Creek and its tributaries, as well as, the White River. Calving *may be affected* near the Kyune Creek and its tributaries.

Crucial habitat for Moose overlaps most of the analysis area. Disturbance to Moose would only occur temporarily and only when conditions are appropriate for work to occur. Thus, Moose during the winter would be relative undisturbed by the project because of the seasonal ability to access the area. The proposed hazardous fuels treatment *may affect* this species (see Chapter 4).

## Fuels & Fire Management

The Reservation Ridge area is currently experiencing a Douglas-fir beetle epidemic. Aerial detection survey maps show tree mortality from Douglas-fir beetle has increased substantially over recent years. Standing dead trees account for approximately 33% of the total basal area across all stands. The number and volume of dead trees (standing and down) is substantial, with the area of outbreak occupying approximately 60% of the area along the first 10 miles of the ridge. Furthermore, most stands along Reservation Ridge Road are in FRCC 2, indicating a departure from the natural fire regime (one to two natural fire-return intervals have been missed). In the absence of disturbance, fuel loading has increased and forest conditions have deteriorated which has contributed to the intensity and extent of the beetle outbreak. These conditions have created a high potential for extreme fire behavior. Fuels *may be affected* by the proposed treatment.

## Livestock Grazing

Livestock grazing is administered through the Price Field Office.

**TABLE 2** Grazing Information

Permittee Number	Allotment Name	Livestock Number	Livestock Kind	Scheduled Use AUMs	Exchange of Use (Numbers/Kind/AUMs)	Season of Use (100%PL)
4300135	Kyune 1 #14128	445	Cattle	448	No EOU listed	20% 06/01–10/31
4300135	Kyune 2 #24062	154	Cattle	380	No EOU listed	49% 06/01–10/31
4300135	West Fork #14134	149	Cattle	150	No EOU listed	20% 06/01–10/31
4307012	Price Canyon West #34094	92	Cattle	523	No EOU listed	94% 05/16–11/15

Livestock graze within the analysis area. Since the proposed units are small in comparison to the entire analysis area, there are many areas for cattle to rotate to by herding during grazing administration. Therefore, cattle would have a *no effect* determination and not discussed further.

## Visual Resources

Visual resources are identified through the Visual Resource Management (VRM) inventory. This inventory consists of a scenic quality evaluation, sensitivity level analysis and a delineation of distance zones. Based on these factors, BLM administered lands are placed into four visual resource inventory classes: VRM Class I, II, III and IV. Class I and II are the most valued, Class III represents a moderate value and Class IV is of the least value. VRM classes serve two purposes: 1) as an inventory tool that portrays the relative value of visual resources in the area, and 2) as a management tool that provides an objective for managing visual resources.

The proposed analysis area is within VRM Classes III and IV. The Class III VRM objective is to partially retain the existing character of the landscape. The level of change to the characteristic

landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the landscape. Changes caused by management activities may be evident and begin to attract attention, but these changes should remain subordinate to the existing landscape.

The Class IV VRM objective is to allow for management activities that involve major modification of the existing character of the landscape. The level of contrast can be high-dominating the landscape and the focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements of the characteristic landscape.

Elevations within the proposed analysis area range from 8,800ft. to 9,700ft. Vegetation is diverse, including a mixture of Douglas-fir, subalpine fir, aspen, limber pine, sagebrush and various shrubs, forbs, and grasses. Many of the trees in the analysis area are dead or dying, resulting in a recent change in visual character (perceived as a decline in scenic quality by most visitors). Some evidence of previous timber harvest (stumps, road system) and public firewood cutting is present in the analysis area but not on BLM administered land. Therefore, VRM *may be affected* by the selected alternative.

### **Woodland & Forestry**

The analysis area has three general forest types Douglas-fir, Seral Aspen/Mixed Conifer, and Subalpine Fir that *may be affected* by the proposed fuel project. Most stands along Reservation Ridge analysis area are in FRCC 2, indicating a departure from the natural fire regime (one to two natural fire-return intervals have been missed). The average fuel loading in the project unit is just over 20 tons per acre. Even during moderate weather conditions, the likelihood of a high intensity wildfire occurring near the road and/or crossing the road is high.

The *Seral Aspen—Mixed Conifer vegetation series* is considered a Douglas-fir covertime, where Douglas-fir dominates, but a significant component of other species exist in the overstory. The stands are all even aged and exhibit the characteristics of a young to mid-age forest. Bark beetle attacks have been impacting the stands, as a result standing dead is a significant component of the over story. The aspen component of the stands is declining and is being replaced by conifer species. The understory of the stands is dominated by shade tolerant subalpine fir which is increasing the amount of ladder fuels.

The *Douglas-fir series* occupies drier forest sites and is more common in eastern end of the analysis area. The stands are all even-aged Douglas-fir exhibiting mid-aged to mature forest development. Douglas-fir is the dominant, if not the sole species, in the overstory. A considerable amount of larger dead trees also exist in the overstory due to a Douglas-fir beetle outbreak that began earlier in this decade. The dominant understory of subalpine fir indicates that Douglas-fir is seral to subalpine fir and is likely being succeeded by it.

The *Subalpine fir series* occupies mesic sites within the analysis area. The stands are mostly even-aged subalpine fir, exhibiting mid-age to old growth forest development.

## CHAPTER 4 ENVIRONMENTAL IMPACTS

### DIRECT AND INDIRECT IMPACTS

#### Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment

##### Fish Habitat

Prescribed burning could cause increased erosion, excessive sediment and debris loading in the stream. These factors can cause detrimental impacts to the habitat downslope to the Kyune Creek Price River HUC 12.

Best management practices:

- 1) Apply a 300' buffer on either side of perennial fish or non-bearing streams, and seasonally flowing or intermittent streams.

##### Forest & Rangelands

Implementation of the Proposed Action would improve overall forest health, and improve the health and vigor of aspen and Douglas-fir stands. Conditions in treated stands would be more representative of FRCC I as a result of thinning to reduce stand density and the removal of dead and dying trees. Aspen stands would benefit from the removal of conifers and cutting or burning of aspen to stimulate suckering to regenerate aspen. Aspen stands treated mechanically or by fire are expected to regenerate at levels that would maintain the long-term viability of the clone. Removal of conifers from aspen stands may also result in increased understory production which is beneficial for wildlife and livestock as well as watershed protection. Douglas-fir stands would benefit from thinning small and less desirable species of live trees to reduce stand density, and the removal of dead and dying trees to reduce fuel loading. Individual trees would be more vigorous and less susceptible to damage from insect and disease as a result of lower stand density.

##### Migratory Birds

The potential affects to migratory birds are identified in the table below: Impact Type across Wildlife Groups. The removal of some timber would reduce some foraging and nesting habitat for migratory birds in the analysis area. Because of the limited amount of habitat impacted in an area surrounding thousands of acres of suitable habitat, the nesting and fledgling of one season may be impacted but would not cause permanent population-level impacts.

**TABLE 3 Impact Type across Wildlife Groups**

Impact Type	Migratory Birds/BCC/PIF	Big Game	Special Status Species/General Wildlife
<b>Temporary</b>			
Displacement/Avoidance	✓	✓	✓
Loss of forage habitat	✓	✓	✓
Loss of nesting habitat	✓	✓	✓
<b>Permanent</b>			
Increase in wildlife habi-	✓	✓	✓

tat understory			
Increase in roosting/nesting habitat	✓		✓
Increase in forage species	✓	✓	✓

Best management practices:

- 1) Avoid habitat restoration activities during the nesting season March 15–July 15.

### **Threatened, Endangered or Candidate Terrestrial Species – Canada lynx**

Canada lynx use of the analysis area would be limited to a travel corridor to allow movement between suitable habitats. The proposed analysis area does not occur within or near a LAU designated by the Canada lynx recovery team. The cutting/burning and removal of trees may remove foraging habitat and cover for lynx traveling through the area. Noise disturbance may cause short term and temporary disturbance. However, Canada lynx would be able to avoid the area and move to adjacent habitat suitable for both foraging and travel that would be unaffected by the proposed project.

Activities related to these actions would occur during spring/summer/fall and would avoid the more stressful periods (denning and winter foraging periods) for lynx as that time would not be feasible for restoration work (Reudiger 2000).

The BLM has determined that the project may affect but not adversely affect Canada lynx. The USFWS has concurred with this affect determination on March 2, 2009.

### **Threatened, Endangered or Candidate Terrestrial Species – Yellow-billed Cuckoo**

The analysis area does not have the patch size nor habitat structure requirements to support breeding yellow-billed cuckoos. Use of the analysis area by the Yellow-billed Cuckoo would be restricted to temporary foraging habitat.

Because of the limited stopover habitat and lack of sufficient breeding habitat it has been determined that the proposed hazardous fuel treatment *is not likely to adversely impact* the Yellow-billed Cuckoo. The BLM has received concurrence of this affect determination from the USFWS on March 2, 2009.

## **Special Status Species – Birds**

### **Black Swift**

Use of the project area by Black Swifts would be limited to foraging in the Kyune Creek system but only if the project occurs in this area of the project boundary. In the rare instance Black Swift are observed in the area, the impact would be a temporary, short-term disturbance. Because the project area lacks appropriate nesting habitat (i.e., waterfalls, high cliffs) and limited water sources, the probability of causing impacts to this species would be highly unlikely. The project would not cause mortality to individuals and or create population-level affects to the species. As a result of this rationale, no mitigation is required.



### **Flammulated Owl**

Potential impacts to the Flammulated Owl include loss of nesting habitat (Ponderosa pine and Douglas-fir forests) and loss of eggs, chicks, and young. Nesting productivity may be affected for a season; however, the long-term impacts of providing aspen regeneration may cause a positive benefit as recent studies in Utah (Oleyar 2000) suggest that the Flammulated Owl could also successfully breed in aspen dominated forest. To minimize destruction of nesting trees and mortality of chicks and young, the following mitigation would be applied:

- 1) Surveys to exclude wildlife trees supporting nesting. Approximately 6–8 standing dead trees per acre would also be retained for wildlife habitat, and would include larger size classes (preferably 18” or larger) within clumps of trees where possible to enhance the value for wildlife;
- 2) Avoid activities during the nesting season March 15–July 15.

### **Greater Sage-grouse**

Project activities could affect this species in later phases of the plan only if such activities occurred this far south of the analysis area; however, the objectives of the project are removal of conifer encroachment and aspen regeneration not sagebrush manipulation. There are no greater sage grouse leks in the analysis area. Potential impacts include noise disturbance from vehicles and equipment and loss or improvement of habitat depending upon the greater sage grouse use season of use and condition of sagebrush habitat. Mitigation would be implemented to prevent disturbances to greater sage grouse.

- 1) No Surface Occupancy (NSO) within 0.5 mile of the perimeter of occupied Greater Sage-grouse leks;
- 2) Allow no human activity which would disrupt sage grouse breeding activities from March 1–May 15 within 0.5 mile of an occupied lek;
- 3) Expand the 0.5 miles buffer to a 2.0 mile buffer of an occupied lek, or within 4.0 miles of identified greater sage grouse nesting and early brood-rearing habitat from March 1–July 15;
- 4) Allow no surface-disturbing or otherwise disruptive activities in winter concentration areas from December 1–March 1.

### **Lewis’s Woodpecker**

Potential impacts to Lewis’s Woodpecker include loss of nesting habitat (dead or decaying pine, fir or aspen tree cavity) and loss of eggs, chicks, and young. Nesting productivity may be affected for a season; however, the long-term impacts of providing more snags would provide a positive benefit by increasing nesting habitat in the analysis area as dead trees and stumps are required for nesting. No population-level affects are anticipated for the Lewis’s Woodpecker.

The prescribed burn could create a net positive impact by providing more nesting and foraging habitat by additional dead trees and stumps that would be created by the prescribed burn. Because the Lewis’s Woodpecker is attracted to burned areas, habitat restoration activities from the burn may attract this species to the area for nesting.

The best management practices would be implemented to prevent the destruction of nesting trees, eggs and young and are as follows:

- 1) Surveys to exclude wildlife trees supporting nesting. Approximately 6–8 standing dead trees per acre would also be retained for wildlife habitat, and would include larger size classes (preferably 18” or larger) within clumps of trees where possible to enhance the value for wildlife;
- 2) Avoid activities during the nesting season March 15–July 15.

### **Northern Goshawk**

There are no known occupied goshawk territories within the vicinity of the project. The closest known goshawk territory is 8+ miles to the southwest of the analysis area and has not been active since 2000. Surveys completed north of the analysis area on Reservation Ridge in 2006 by the Ashley NF resulted in no detections of goshawks (USDA FS 2006b). Nesting habitat for the Northern Goshawk could be destroyed in the short term; however, long-term benefits include positive impacts that help meet the strategy goals and objective of the Goshawk Habitat Management Strategy for Utah.

The prescription of the proposed project is within the guidelines of the Goshawk Habitat Management Strategy for Utah for the recommended number of snags and down logs and tons of woody debris per acre to create Desired Habitat Conditions (DHC) (See Goshawk Habitat Management Strategy for Utah pp.7 & 8). The project goals are also aligned with obtaining DHCs by providing a variety of structure vegetation stages with forest cover types represented by early seral tree species.

The BLM SLFO Wildlife Biologist would conduct playback surveys during the breeding season to determine territory occupancy. If territories are discovered, the BLM would follow the BLM 1998 Goshawk Management Plan during project activities. In the event nesting is occurring the following conservation measures would be implemented:

Protect active nests areas = 30 acres and their post-fledgling area = 420 acres from disturbance during critical phases of reproduction. The recommended seasonal restriction from the Reynolds et al. 1992 is March 1–September 30.

### **Red-naped Sapsucker**

Potential impacts to Red-naped Sapsucker include loss of nesting habitat (live coniferous forests and montane riparian woodlands), loss of eggs, chicks, and young. Nesting productivity may be affected for a season; however, the 2006 Ashley NF conducted surveys in 2006 (which occurred adjacent to this project north of Reservation Ridge) indicated that population trends on the Ashley NF are stable. Additionally, hundreds of acres would be removed compared to the thousands of acres of suitable nesting habitat for this species is in the project vicinity. No population-level affects are anticipated for the Red-naped Sapsucker. Nesting trees, eggs, and young would be protected by applying the following mitigation measures:

- 1) Avoid activities during the nesting season March 15–July 15;
- 2) Approximately 6–8 standing dead trees per acre would also be retained for wildlife habitat, and would include larger size classes (preferably 18” or larger) within clumps of trees where possible to enhance the value for wildlife.

### **Short-eared Owl**

Implementation of this project may displace individual ground-nesting short-eared owls. The analysis area has little appropriate habitat for this species. It is determined that the proposed alternative may impact individual short-eared owl, but would not cause a trend toward their federal listing or cause a loss of viability to the population of this species. No population-level effects are anticipated for the short-eared owl.

The best management practices would be implemented to prevent the destruction of nests, chicks and young:

- 1) Avoid activities during the nesting season March 15–July 15.

### **Three-toed Woodpecker**

The Three-toed Woodpecker has the most diverse habitat requirements of the potential Woodpeckers nesting in the analysis area. This species is a primary excavator either nesting in a variety of live (including aspen) or dead trees, as long as the wood is soft. Potential impacts to three-toed Woodpeckers could include loss of foraging (i.e., dead trees with beetles) and nesting habitat; however, these losses would be offset by creating more nesting habitat via aspen generation and more snags. Three-toed Woodpeckers have been seen foraging on burnt spruces beneath the bark and may use the burnt trees as a foraging resource. Another impact could be the loss of eggs, chicks and young, which would be a one-season event and would not cause population-level effects to the species. These impacts would be mitigated by applying the following conservation measures:

- 1) Avoid activities during the nesting season March 15–July 15;
- 2) Approximately 6–8 standing dead trees per acre would also be retained for wildlife habitat, and would include larger size classes (preferably 18” or larger) within clumps of trees where possible to enhance the value for wildlife.

### **Williamson’s Sapsucker**

Potential impacts to the Williamson’s Sapsucker include loss of nesting habitat (dead or decaying pine, fir or aspen tree cavity) and loss of eggs, chicks, and young. Nesting productivity may be affected for a season; however, the long-term impacts of providing more snags would provide a positive benefit by increasing nesting habitat in the project area. No population-level effects are anticipated for the Williamson’s Sapsucker.

Best management practices would be implemented to prevent the destruction of nesting trees, eggs, chicks and young:

- 1) Avoid activities during the nesting season March 15–July 15;
- 2) Approximately 6–8 standing dead trees per acre would also be retained for wildlife habitat, and would include larger size classes (preferably 18” or larger) within clumps of trees where possible to enhance the value for wildlife.

## **BLM Special Status Species - Mammals**

### **Fringed Myotis bat**

Loss of foraging habitat may occur; however, because of the available forage within the vicinity, the project would not cause a trend toward their federal listing or cause a loss of viability to the population of this species. Water sources would be protected by:

- 1) Apply 300' buffer around riparian habitat.

### **Spotted bat**

Loss of foraging habitat may occur; however, because of the available forage within the vicinity, the project would not cause a trend toward their federal listing or cause a loss of viability to the population of this species. Water sources would be protected by:

- 1) Apply 300' buffer around riparian habitat.

### **Townsend's big-eared bat**

Loss of foraging habitat may occur; however, because of the available forage within the vicinity, the project would not cause a trend toward their federal listing or cause a loss of viability to the population of this species. Water sources would be protected by:

- 1) Apply 300' buffer around riparian habitat.

### **Western Red Bat**

Suitable habitat exists for this species near the Kyune Creek River drainage and Kyune Reservoir. Western Red Bats eat insects, often foraging near riparian areas. Impacts to Western Red Bats would be limited to foraging areas and are not anticipated to cause a loss of viability to the population of this species. Water sources would be protected by:

- 1) Apply 300' buffer around riparian habitat.

### **Pygmy Rabbit**

The Pygmy Rabbit is a sagebrush obligate species. UNHP has no documented records for the Pygmy Rabbit. Suitable habitat is limited to the far southern portion of the project area in sagebrush habitat. Because of the limited amount of sagebrush in the project area that may be affected, project activities are not anticipated to cause a loss of viability to the population of this species.

Best management practices would be followed for the Pygmy Rabbit:

- 1) Conduct a biological clearance in appropriate habitat for Pygmy Rabbit, if warranted.

## **BLM Special Status Species – Amphibian & Reptile**

### **Western toad**

Potential impacts would include destruction of eggs, larvae, tadpoles and adults from disturbance to the Kyune Creek River drainage, Kyune Reservoir, and Big Creek. However, these impacts would be mitigated by applying the follow conservation measure:

- 1) Apply 300' buffer around riparian habitat.

### **Smooth green snake**

Potential impacts would include destruction of eggs, young and adults from disturbance to the Kyune Creek River drainage, Kyune Reservoir, and Big Creek. However, these impacts would be mitigated by applying the follow conservation measure:

- 1) Apply 300' buffer around riparian habitat.

### **Wetlands & Riparian Zones**

Mechanic treatments outlined in Alternative A would have minimal impacts to riparian zones within the project area. Prescribed fire within the project area could considerably reduce percent cover of surface vegetation and plant taxa richness in comparison to unburned sites which could affect vegetation understory and soil erosion potential (Bêche et al. 2005) in the short term.

Downstream movement of sediment and/or lack of vegetation cover could affect the energy dissipation of heavy rains and spring run-off.

Prescribed fire can either have no or short-lasting ( $\leq 1$  year) impact on riparian zones when only a small portion ( $< 20\%$ ) of the watershed area is burned. Factors affecting these impacts include topography, fire severity, and precipitation events occurring in the area within 1 year after the fire. Negligible impacts occur when the topography of the watershed stream gradient is low to moderate, when the fire severity is low to moderate and when relatively low precipitation events (and thus, stream flow) occur post-fire (Bêche et al. 2005). Impacts to riparian zones caused by prescribed fire could be considerable in areas where the prescribe fire covers an area larger than 20% of the watershed and the fire severity is high and in steep topography. However, prescribed burning would occur on a small scale ( $< 20\%$ ) within the analysis area and is likely to have only short term impacts, with potential long term benefits.

### **Wildlife**

The activities associated with the habitat restoration project may result in adverse direct and positive indirect affects on biological resources. Direct affects associated with construction activities include:

- 1) Behavioral disturbance and displacement of wildlife within and adjacent to the treatment(s) unit (temporary);
- 2) Loss and fragmentation of wildlife habitat associated with clearing and burning (temporary);
- 3) Potential for mortality for wildlife species with limited mobility or that occupy burrows or nests in work areas (temporary);
- 4) Indirect affects associated with construction activities include:
  - a) increase in wildlife habitat understory for ungulates and other wildlife;
  - b) increased in potential for the establishment and spread of noxious weeds in disturbed areas (permanent); and
  - c) increase in dead trees and snags for wildlife use (bats roosting, cavity-nesting birds).

### **Wildlife – Elk**

Elk crucial summer and winter foraging habitat would be positively impacted by removing dead and dying trees to allow aspen regeneration and herbaceous and shrub understory for foraging habitat. Big game security cover would be decreased in the project area; however, thousands of suitable habitats are adjacent to the project vicinity. Animals could be temporarily displaced during certain seasons but the following mitigation would be applied:

- 1) Avoid crucial Elk winter range December 1–April 30.

### **Wildlife – Mule deer**

Only a small portion of the project area overlaps crucial winter range, in the same general area as mule deer winter range. Mule deer habitats would be positively impacted for the same reasons as discussed for Elk. Project activities would create opportunities for early seral plants to develop which are preferred forage for mule deer. Animals may be temporarily displaced during certain seasons but the following mitigation would be applied:

- 1) Avoid crucial mule deer winter range December 1–April 15.

### **Wildlife – Moose**

Short-term temporary displacement and loss of wintering foraging may occur; however, long term, the project activities would increase foraging habitat for Moose. Impacts to crucial wintering and calving habitat (Kyune Creek and its tributaries, as well as, the White River) would be minimized by the stipulations listed below. Aquatic areas used for foraging and calving would also be mitigated by applying best management practices:

- 1) Avoid crucial winter range December 1–April 15;
- 2) Avoid crucial calving areas May 1–June 30;
- 3) Apply 300' buffer around riparian habitat.

### **Fuels & Fire Management**

The project is designed to reduce the risk to public and firefighter safety, nearby private lands, and also to help restore more natural forest conditions. The desired conditions for this treatment area would provide defensible space and allow for the safety of suppression resources in the event of a wildfire. Fuel load reduction would help restore aspen stands and create conditions that would likely exist under more natural fire-return intervals (FRCC 1) which would reduce fire intensity and create conditions that would allow natural fire to burn with less intensity. There are no current or foreseeable negative cumulative effects that impact fuels or fire management in the proposed project area.

### **Visual Resources**

The proposed treatments would modify the existing vegetation in the area through fire and/or mechanical treatment, which would affect the color, form and texture of visual resources in the area. Mechanical modifications would thin the existing vegetation—reducing the dominance of dead trees, woody debris, and dense undergrowth. This thinning would be done to conform to the basic characteristics of the existing landscape and, as such, may attract the attention of the casual observer but would not dominate the view. Prescribed fire would create a dominant affect

on visual resources in the area; however, this impact would be reduced by conducting the fire in areas less frequented by visitors. For a few years, post-treatment debris and ash piles would affect the visual resources of the area.

The purpose of the vegetation manipulation, removal and burning is specifically for hazardous fuel reduction—to decrease the potential for large wildfires. The wildfire risk and the visual impacts from such large wildfires would affect the visual resources on a much larger scale. So, in the long-term, it is anticipated that the reduction in dead trees, more open forest conditions, and increased production in the understory would improve the visual resources of the area.

In the short-term the prescribed fire would not be consistent with Class III objectives. However, in the long-term, both prescribed fire and mechanical treatments would be consistent with both Class III and Class IV visual resource objectives which allow, respectively, for moderate and major modification of the existing character of the landscape. In the long-term, the overall effect of the prescribed fire in improving vegetative conditions within the area would add to the visual resources of the area, thus creating an area more in conformance with the Class III objective of not only partially retaining, but improving, the existing natural character of the landscape. There would be no problem with meeting the Class IV visual resource objective.

### **Woodland & Forestry**

Implementation of the Proposed Action would improve overall forest health, and improve the health and vigor of aspen and Douglas-fir stands. Conditions in treated stands would be more representative of FRCC I as a result of thinning to reduce stand density and the removal of dead and dying trees. Aspen stands would benefit from the removal of conifers and cutting or burning of aspen to stimulate suckering to regenerate aspen. Aspen should be the dominant species in these stands for 40–50 years following successful treatment. Douglas-fir stands would benefit from thinning small and less desirable species of live trees to reduce stand density, and the removal of dead and dying trees to reduce fuel loading. Individual trees would be more vigorous and less susceptible to damage from insect and disease as a result of lower stand density.

### **Cumulative Effects**

Cumulative impacts are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

The Roosevelt/Duchesne Ranger District, Ashley NF would be conducting fuels management activities on up to 1,000 acres along or near FSR 147. Creation of a shaded fuel break within 600 feet of the road for a distance of up to ten miles has already begun. In conjunction with FS efforts, we propose fuel reduction treatments on BLM administered lands adjacent to USFS lands along Reservation Ridge Road and extending south into the basin below the ridgeline.

This proposed action is in cooperation with the Ashley NF, and the Utah Division of Forestry, Fire, and State Lands.

The risk of wildland fire in this area has the potential of burning a high number of acres. This treatment would greatly reduce and discourage a catastrophic fire, encourage proactive manage-

ment of resource values, and create conditions that would allow the future use of natural and prescribed fire to achieve resource objectives.

Manipulating vegetation could directly influence the success of BLM meeting Utah's Standards for Rangeland Health. Overall, the project would restore native aspen stands within the area.

Scheduled monitoring would ensure proper management of natural resources. Monitoring information can be found in the Fuels project file.

## **Alternative B/Prescribed Fire**

### **Fish Habitat**

The same impacts to fish habitat are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

### **Forests & Rangelands**

Broadcast prescribed fire would temporarily reduce ground cover, but may slightly increase the establishment of understory plants with a moderate to high value for watershed protection. Fire would remove most of the litter in the conifer stands initially; however, ground cover would be expected to increase within a few years (i.e. 2–5 years) due to accumulation of fallen needles and branches of surviving conifers. The removal of litter from the forest floor would temporarily open niches for understory plant establishment, but not to the degree that would modify existing plant community dynamics in the long term. Aside from the potential benefits, using prescribed fire under current conditions could result in soil scorch which may negatively impact soils, seed banks, hydrologic function, and vegetation response.

### **Migratory Birds**

The same impacts to migratory birds are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

### **Threatened, Endangered or Candidate Animal Species – Canada lynx**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

### **Threatened, Endangered or Candidate Animal Species – Yellow-billed Cuckoo**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

### **BLM Special Status Species – Birds**

#### **Black Swift**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.



**Flammulated Owl**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Greater Sage-grouse**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Lewis's Woodpecker**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Northern Goshawk**

Similar impacts to Northern Goshawk are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Red-naped Sapsucker**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Short-eared Owl**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Three-toed Woodpecker**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Williamson's Sapsucker**

Similar impacts to this species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Wetlands & Riparian**

The same impacts to riparian zones are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Wildlife – Elk**

Same impacts to Elk are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Wildlife – Mule deer**

Same impacts to mule deer are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Wildlife – Moose**

Same impacts to Moose are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**BLM Special Status Species – Mammals****Fringed Myotis bat**

Same impacts to this bat species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Spotted bat**

Same impacts to this bat species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Townsend's big-eared bat**

Same impacts to this bat species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Western Red Bat**

Same impacts to this bat species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Pygmy Rabbit**

Same impacts to Pygmy Rabbit are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**BLM Special Status Species – Amphibians/Reptiles****BLM Special Status Species – Western toad**

Same impacts to this toad species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**BLM Special Status Species – Smooth green snake**

Same impacts to this snake species are anticipated as described in Chapter 4 Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment.

**Fuels & Fire Management**

Although fire could be an effecting means of reaching the desired objective, current fuel loading (about 20 tons/acre) within the analysis area creates unacceptably high risk of escape and potential harm to fire fighters and nearby structures. Prescribed fire could only be used safely by reducing fuel loads and ladder fuels by mechanical or hand thinning prior to implementation.

**Visual Resources**

The proposed prescribed fire treatment would create a dominant effect on visual resources in the area. This impact would be reduced by conducting the fire in areas less frequented by visitors. Also, the purpose of the burning is specifically for hazardous fuel reduction—to decrease the po-

tential for large wildfires. The wildfire risk and the visual impacts from such large wildfires would affect the visual resources on a much larger scale. So, in the long-term, it is anticipated that the reduction in dead trees, more open forest conditions, and increased production in the understory would improve the visual resources of the area.

In the short-term the prescribed fire would not be consistent with Class III objectives. However, in the long-term, the overall effect of the prescribed fire in improving vegetative conditions within the area would add to the visual resources of the area, thus creating an area more in conformance with the Class III objective of not only partially retaining, but improving, the existing natural character of the landscape. There would be no problem with meeting the Class IV visual resource objective.

### **Woodland & Forestry**

Woodland and Forestry effects of Alternative B/Prescribed Fire would be similar to Alternative A/Proposed Action/Prescribed Fire & Mechanical Treatment except the ability to selectively remove trees using prescribed fire would be less than when using mechanical treatments. Even under the best conditions prescribed burning does not allow for selective removal of individual trees. Thus, meeting the desired silvicultural and forest health objectives becomes extremely difficult if not impossible. Additionally, broadcast burning could potentially increase the spread of beetles by weakening healthy trees and making them targets for beetle infestation.

## **Alternative C/No Action/No Fuels Project**

### **Fish Habitat**

The no action alternative would not change the current environmental conditions for fish habitat.

### **Forests & Rangelands**

With the no action alternative, aspen clones are at risk of being lost, and understory vegetation biomass and diversity would likely decrease. Absence of disturbance over a long period of time tends to reduce vigor in many aspen clones and promotes conifer expansion. Continued conifer recruitment into aspen and shrub communities in the project area indicates a downward trend in plant species that are valuable as forage for wildlife and livestock as well as for watershed protection.

Additionally, without treatment the conifer stands would increase in density as new growth replaces trees killed by insects. Existing standing snags would decay and topple, thereby, increasing fuel loadings to the point where mechanical removal costs would be exorbitant. Moreover, heavier concentrations of ground fuels in the combustion phase have a longer residence time, increasing the likelihood of soil scorch in the event of a wildfire. This would hinder regeneration due to the destruction of seedbanks and seed sources. Erosion would most likely increase due to the lack of vegetation needed to stabilize soils and to absorb runoff.

### **Migratory Birds**

There would not cause a temporary disturbance to nesting birds or a loss of their habitat, eggs, chicks or young. However, over the long-term, depending upon the bird species, the ecological condition of the area as it exists now would be less beneficial to migratory birds because of conifer encroachment decreasing understory.

### **Threatened, Endangered or Candidate Animal Species – Canada lynx**

If this rare species were found in the project area, the no action alternative would not cause any change in the current environmental conditions for this species.

### **Threatened, Endangered or Candidate Animal Species – Yellow-billed cuckoo**

If this rare species were found in the analysis area, the no action alternative would not cause any change in the current environmental conditions for the species.

### **BLM Special Status Species – Birds**

#### **Black Swift**

If this rare species would be found in the project area, the no action alternative would not cause any change in the current environmental conditions for this species.

#### **Flammulated Owl**

There would not be any temporary disturbance to nesting birds or a loss of habitat, eggs, chicks or young. However, over the long-term, the ecological condition of the area would be less beneficial to the Flammulated Owl because of decreases in foraging and nesting habitat as conifer encroachment continues and more conifers die from beetle kill.

**Greater Sage-grouse**

There would not be any temporary disturbance to the Greater Sage-grouse or a loss of habitat. However, over the long-term, the habitat conditions would be unfavorable due to the continuation of conifer encroachment to sagebrush habitat.

**Lewis's Woodpecker**

There would not be any temporary disturbance to nesting birds, a loss of habitat, eggs, chicks, or young. However, over the long-term, the ecological condition of the analysis area would be less beneficial to the Lewis's Woodpecker. Foraging and nesting habitat would decrease as the conifer encroachment continues and more conifers die from beetle kill.

**Northern Goshawk**

In the short-term, there would not be any temporary disturbance to nesting birds or a loss of habitat, eggs, chicks or young; however, the existing conditions are not a proactive approach to the conservation and management of Northern Goshawk.

**Red-naped Sapsucker**

There would not be any temporary disturbance to nesting birds or loss of habitat, eggs, chicks or young. However, over the long-term, the ecological condition of the area would be less beneficial to the Red-naped Sapsucker because of decreasing foraging and nesting habitat as the conifer encroachment continues and more conifers die from beetle kill.

**Short-eared Owl**

There would not be a change in the current conditions for this species.

**Three-toed Woodpecker**

There would not be a temporary disturbance to nesting birds or a loss of habitat, eggs, chicks or young. However, over the long-term, the ecological condition of the area would be less beneficial to the Three-toed Woodpecker by decreasing foraging and nesting habitat as the conifer encroachment continues and more conifers die from beetle kill.

**Williamson's Sapsucker**

There would not be a temporary disturbance to nesting birds or loss of habitat, eggs, chicks or young. However, long-term, the ecological condition of the area would be less beneficial to the Williamson's Sapsucker by decreasing foraging and nesting habitat as the conifer encroachment continues and more conifers die from beetle kill.

**Wetland & Riparian Zones**

Current conditions of the riparian areas would be maintained.

**BLM Special Status Species – Mammals****Fringed Myotis bat**

The no action alternative would not cause any change in the current conditions for this species.

**Spotted bat**

The no action alternative would not cause any change in the current conditions for this species.

**Townsend's big-eared bat**

The no action alternative would not cause any change in the current conditions for this species.

**Western Red Bat**

The no action alternative would not cause any change in the current conditions for this species.

**Pygmy Rabbit**

The no action alternative would not cause any change to the Pygmy Rabbit or a loss of their habitat. However, over the long-term, the habitat condition would be unfavorable to Pygmy Rabbits with the continuation of conifer encroachment into sagebrush habitat.

**BLM Special Status Species – Amphibians & Reptiles****Western toad**

The no action alternative would not cause any change for this species.

**Smooth green snake**

The no action alternative would not cause any change for this species.

**Fuels & Fire Management**

The area would continue to be at high risk of wildfire and therefore the practice of allowing naturally occurring fires to burn, for resource benefit, would not be allowed but suppressed. The risk to public and firefighter safety in the event of a wildfire would continue. The area would likely continue to trend away from natural conditions.

Wildland fire danger would continue to remain at high risk in FRCC 2 and most likely move into FRCC 3 because of rapid spread of beetles.

**Wildlife – Elk**

There would not be a temporary displacement of animals or habitat loss. Over the long-term, the existing conditions could be detrimental to Elk in the project area by not providing adequate forage for this species.

**Wildlife – Mule deer**

There would not be a temporary displacement of animals or habitat loss. Over the long-term, the existing environment could be detrimental to mule deer. Forage, in the form of plants in early seral stages, would decrease.

**Wildlife – Moose**

There would not be temporary displacement of Moose or habitat loss. Over the long-term, habitat loss could be detrimental to Moose in the project area by not providing adequate forage in the form of new woody growth during the spring and summer.

### **Visual Resources**

If the proposed action is not implemented, the on-going tree mortality and the potential for high-intensity wildfire would greatly affect visual resources. Lack of treatment could result in major vegetation changes that would be considered undesirable by many visitors for decades to come. These major changes would be consistent with VRM Class IV objectives, which allow for such, but would not be consistent with VRM Class III objectives which only allow for moderate changes that are subordinate to the existing landscape.

### **Woodland & Forestry**

Insect damage would continue to occur and forest health would continue to decline. The stands would increase in density as new growth replaces trees killed by insects. Existing standing snags would decay and topple, thereby, increasing fuel loadings to the point where mechanical removal costs would be exorbitant. Moreover, heavier concentrations of ground fuels in the combustion phase have a longer resonance time, increasing the likelihood of soil scorch in the event of a wildfire. This would hinder regeneration due to the destruction of seedbanks and seed sources. Erosion would most likely increase due to the lack of vegetation needed to stabilize soils and to absorb runoff.

### **Cumulative Effects**

As vegetation remains untreated, hazardous fuels would increase and remain at risk to catastrophic wildfire. The risk to resource values would remain moderate to high with the increase in hazardous fuels.

Community members and private landowners may accomplish fire hazard reduction work independently of BLM actions. However, the prevalence of heavy fuel loading on BLM land in the area would allow a large fire hazard to remain unchecked.

## CHAPTER 5 PERSONS, GROUPS, AND AGENCIES CONSULTED

### Tribes, Notification, Consulted

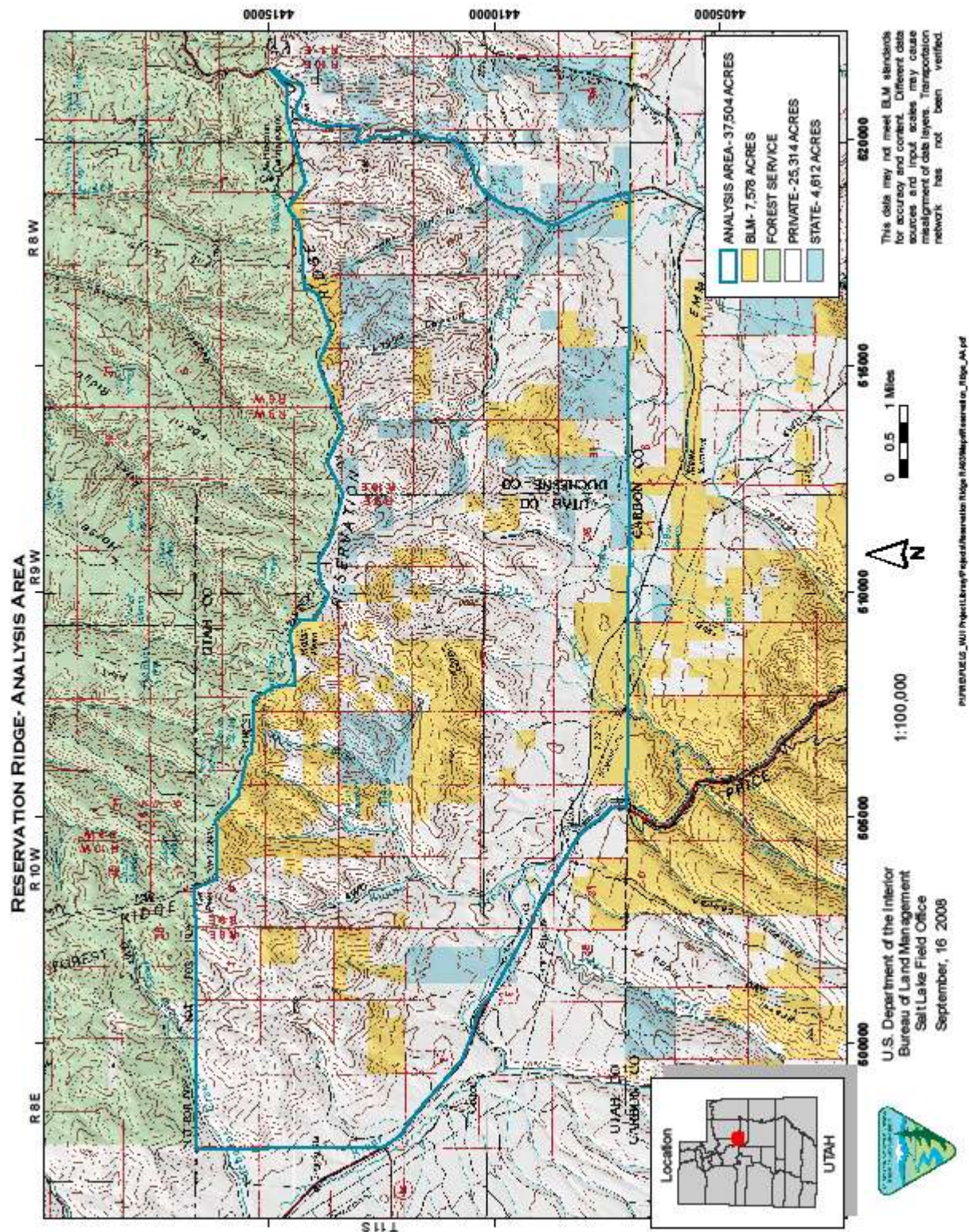
Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Northwest Shoshone, Ute Mountain Ute Tribe, Confederated Tribes Of The Goshute Reservation, White Mesa Ute Council Laguna Pueblo, Southern Ute Tribal Council, Ute Indian Tribe, Santa Clara Pueblo, Hopi Tribal Council, Zia Pueblo, Navajo Nation, Northwestern Band Of Shoshone Nation, Eastern Shoshone Business Council	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	A registered letter was mailed from the SLFO to the listed tribes. No comments have been received thus far relative to the proposed action.
Environmental Notification Bulletin Board (ENBB) <a href="https://www.ut.blm.gov/enbb/">https://www.ut.blm.gov/enbb/</a>	NEPA – public notification	Posted on 10/15/2008
U.S. Fish and Wildlife Service Utah Field Office 2369 West Orton Circle, Suite 50 West Valley City, UT 84119	Consultation Section 7 Concurrence:	Not likely to adversely affect determination.

### Contributors

Name	Title	Resource Element
Ambur Mathews SLDO	Fuels Environmental Specialist	EA Coordinator, Fire & Fuels
Brad Jessop SLDO	Natural Resource Specialist	Development of Proposed Treatment, Woodland & Forestry, Fire & Fuels, Project Coordinator
Brook Chadwick SLDO	Fuels Specialist	Development of Proposed Treatment, Project Coordinator
Cindy Ledbetter SLDO	Environmental Specialist	Conformance and EA review
David Palmer Green River District	Forester	Woodland & Forestry in Chapters 3 & 4
JuLee Pallette SLDO	Recreation Planner	Visual Resource Management
Karl Ivory Price Field Office	Natural Resource Specialist	Riparian information in Chapters 3 & 4
Traci Allen SLDO	Wildlife Biologist	Migratory Birds, T&E Special Status Species, Fish and Wildlife
Stephanie Bauer Price Field Office	Rangeland Management Specialist	Livestock Grazing Table in Chapter 3



## APPENDIX A Map





## Appendix B — References

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